

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, or claims in the application.

Listing of the Claims:

1. – 10. (Cancelled).

11. (Currently amended) An artificial full-thickness corneal transplant support comprising:

a) a base biopolymer having the thickness of approximately an average cornea;

b) said biopolymer having incorporated within ~~in~~ it an attachment reagent comprising one or more of the following: laminin, fibronectin, RGDS (SEQ ID NO: 1), bFGF conjugated with polycarbophil, EGF conjugated with polycarbophil, and heparin sulfate; and

c) said biopolymer having the shape of a cornea and suitable for implantation onto a damaged cornea.

12. (Original) The composition of claim 11 wherein the biopolymer is comprised of collagen IV.

13. (Currently amended) An artificial full-thickness corneal transplant comprising:

a) a base biopolymer having the thickness of approximately an average cornea;

b) said biopolymer having incorporated within ~~in~~ it an attachment reagent comprising one or more of the following: laminin, fibronectin, RGDS (SEQ ID NO: 1), bFGF conjugated with polycarbophil, EGF conjugated with polycarbophil, and heparin sulfate;

c) said biopolymer having the shape of a cornea; and

d) a confluent layer of ~~HCEC~~ human corneal endothelial cells on said biopolymer;

e) said transplant suitable for implantation onto a damaged cornea.

14. (Currently amended) An artificial half-thickness corneal transplant support comprising:

a) a base biopolymer having the thickness of approximately one half the thickness of an average cornea;

b) said biopolymer having incorporated within ~~in~~ an attachment reagent comprising one or more of the following: laminin, fibronectin, RGDS (SEQ ID NO: 1), bFGF conjugated with polycarbophil, EGF conjugated with polycarbophil, and heparin sulfate; and

c) said biopolymer having the shape of a cornea and suitable for implantation onto a damaged cornea.

15. (Currently amended) An artificial half-thickness corneal transplant comprising:

a) a base biopolymer having the thickness of approximately one half the thickness of an average cornea;

b) said biopolymer having incorporated within ~~in~~ an attachment reagent comprising one or more of the following: laminin, fibronectin, RGDS (SEQ ID NO:

1), bFGF conjugated with polycarbophil, EGF conjugated with polycarbophil, and heparin sulfate;

- c) said biopolymer having the shape of a cornea; and
- d) a confluent layer of HCEC human corneal endothelial cells on said biopolymer;
- e) said transplant suitable for implantation onto a damaged cornea.

16. (Original) The artificial cornea of claim 15 wherein the biopolymer is collagen IV.

17. (Currently amended) The artificial cornea of claim 11 wherein the biopolymer is non-swelling in the presence of culture media.

18. – 26. (Cancelled).